



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
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APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/053,192	01/15/2002	Heinrich Bachmann	20347US1 (C38435/111656)

CONFIRMATION NO. 4078

FORMALITIES LETTER



OC000000007971143

Stephen M. Haracz, Esq.
Bryan Cave, LLP
245 Park Avenue
New York, NY 10167-0034

Date Mailed: 04/29/2002

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(l) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Substitute drawings in compliance with 37 CFR 1.84 because:
 - drawing sheets do not have the appropriate margin(s) (see 37 CFR 1.84(g)). Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch);
 - drawings contain excessive text Suitable descriptive legends may be used, or may be required by the Examiner where necessary for understanding of the drawing but should contain as few words as possible (see 37 CFR 1.84(o));

Items Required To Avoid Processing Delays:

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

SUMMARY OF FEES DUE:

10/04/2002 SSESHE1 00000021 10053192

01 FC:105

130.00 0P

- **\$130** Late oath or declaration Surcharge.

Y.G.
Customer Service Center
Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



#6

Docket No.: 20347 US1 (C38435/128985)

MP/17

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :)	
Heinrich BACHMANN, <i>et al.</i>)	Examiner: not yet assigned
Serial No.: 10/053,192)	Art Unit: 1652
Filed: January 15, 2002)	
For: β,β-CAROTENE 15,15'- MONOOXYGENASES, NUCLEIC ACID SEQUENCES CODING THEREFOR AND THEIR USE)	

10/04/2002 SSESHE1 00000021 10053192

02 FC:117

920.00 OP

New York, NY
September 30, 2002

**RESPONSE TO NOTICE TO FILE MISSING
PARTS AND PETITION FOR EXTENSION OF TIME**

Box Missing Parts
Commissioner For Patents
Washington, D.C. 20231

Sir:

The shortened statutory period of time for response to the Notice to File Missing Parts of Nonprovisional Application - Filed Under 37 CFR 1.53(b) - Filing Date Granted ("Notice") mailed April 29, 2002, expired on June 29, 2002. A three-month extension of time to respond to the Notice is hereby requested. With this extension, the due date for reply to the Notice is September 30, 2002, because September 29, 2002 fell on a Sunday. 37 CFR §§ 1.7, 1.8 and 1.136. Enclosed is a check in the amount of \$920 to cover the fee for the extension of time.

Docket No.: 20347 US1 (C38435/128985)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :)	
Heinrich BACHMANN, <i>et al.</i>)	Examiner: not yet assigned
Serial No.: 10/053,192)	Art Unit: 1652
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New York, NY
September 30, 2002

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In response to the Notice, we submit herewith the following:

- (1) a Declaration signed by the inventors (Exhibit 1);
- (2) Office Copy of the Formalities Letter; (Exhibit 2);
- (3) Substitute Drawings (sheets 1-12) with the appropriate margins pursuant to 37 CFR § 1.84(g) and without the asserted "excessive text" pursuant to 37 CFR 1.84(o) (Exhibit 3);
- (4) a "marked-up" version of the amendment to the specification (Exhibit 4);
- (5) a check in the amount of \$130.00 to cover the surcharge; and
- (6) a check in the amount of \$920.00 to cover the fee for the petition for extension of time.

If either or both of the checks are missing or otherwise insufficient, or if any additional fees are required, the Commissioner is authorized to charge (or credit any overpayment) to Deposit Account No. 02-4467. A duplicate copy of the first two pages of this communication is enclosed.

Please amend the application as follows:

IN THE DRAWINGS

Please cancel the drawings as filed and replace them with the Substitute Drawings attached hereto as Exhibit 3.

IN THE SPECIFICATION

Please amend the specification as follows (a "marked up" version of the amendment is attached hereto as Exhibit 4 pursuant to Rule 1.121(b)):

On page 1, replace paragraphs [0023] - [0025] with the following paragraphs:

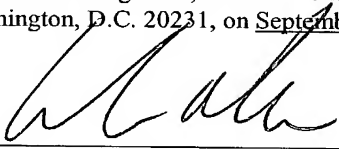
[0023] Figure 6 shows a 10% polyacrylamide gel with two fractions of *E. coli* expressed β,β -carotene 15,15'-monooxygenase after affinity tag purification. Lanes 1 and 2 show two fractions eluted from a Co^{2+} -chelate column showing the main band at 60 kD. Lane 3 is a low range molecular weight marker (Bio Rad).

[0024] Figure 7 shows an HPLC analysis of an activity test of β,β -carotene 15,15'-monooxygenase which was cloned and expressed in *E. coli*. The HPLC profile is of the reaction mixture at the end of an activity assay for the β,β -carotene 15,15'-monooxygenase following the procedure in Example 1. The first peak in the chromatogram represents the internal standard, while the second peak corresponds to retinal as the only product formed during the central cleavage with β -carotene as substrate.

[0025] Figure 8 is a chromatogram demonstrating that the peak from Fig. 7 representing the only product of the enzymatic cleaving is retinal. A sample which was positive in the activity assay (green (upper) chromatogram) was spiked with retinal and

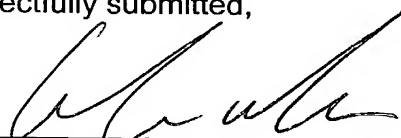
In view of the foregoing, entry of and approval of the amendments, and passage of the application to an Art Unit for action on the merits, respectfully, is requested. If the PTO has any questions regarding this paper, please contact the undersigned attorney.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Box Missing Parts, Commissioner For Patents, Washington, D.C. 20231, on September 30, 2002.



Gonzalo Merino

Respectfully submitted,

By: 

Gonzalo Merino
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